The R&D 100 Award Team

• Laboratory Coordinator	Cindy Boone
• IM-1 Writer/Editor	Eileen Patterson
• IM-1 Design Coordinator	Chris Brigman
• IM-9 Photography and Video	
• Intellectual Property Review patents & copyrights	Christine Ramos
• Business Patent Law	Patent attorneys
• Tech. Mgmt. Team	Allen Morris, Randy Tremper and Eric Canuteson
• Interview Coordinator	Carole Travis
• Interview Committee	TBD
• Technical Advisory Reviewers	TBD

R&D 100 Advisory Committee

Don Coates	P	Cindy Boone	TT
David Schiferl	C	Randy Tremper	TT-TMT 3
Rob Hermes	B & T	Allen Morris	TT-TMT 1
Bruce Lamartine	J & N	Eric Canuteson	TT-TMT-2
David Watkins	STB-LDRD	David Salazar	Patent Law
TBD	MST	Christine Ramos	Intellectual Property
TBD	CCS	Review	
TBD	CCN		
TBD	ESA	Eileen Patterson	IM – Writer/Editor
TBD	EES	Chris Brigman	IM – Designer
TBD	DX	Brian Fishbine	IM – Technical writer/Editor
Others	as needed	Judy Prono	IM – Technical writer

What is the R&D 100 Award Competition?

- **International Competition**

- **Honors 100 most significant technical advances**

- **Past winners include**
  - **– Polacolor film**
  - **– Digital Watch**
  - **– ATM machine**
  - **– Halogen lamp**
  - **– Flashcube**
  - **– Antilock brakes**
  - **– LCD**
  - **– fax machine**

"The Oscars of Invention" — *Chicago Tribune*
"Nobel Prizes of Applied Research"

R&D 100 Awards recognize the efforts of the best scientists and engineers in industry, government, and academic research

Winning Criteria:

- ***Breakthrough products or processes that promise to improve people's lives through technological advances.***

- ***Winning research must not only be original but also show promise of real-world application.***

Los Alamos R&D 100 Award Record

- **Since 1978 (LANL's first entry) – 94 winners**

Many entries and winners result in patents, copyrights, licenses, and collaborative agreements with industry and academia.

July 2004

R&D 2005

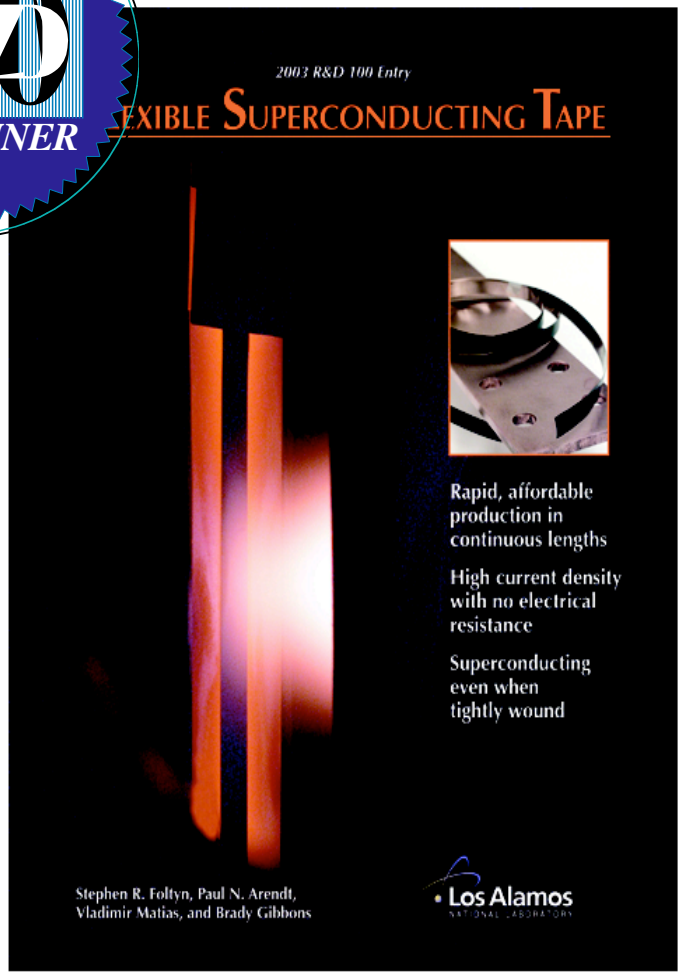
R&D 100 Award Statistics for DOE Laboratories

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	'01	'02	'03	'04	'88-'03	Total '64-'03
LANL	8	3	7	4	6	4	6	6	2	6	4	7	2	3	2	8	5	83	94
LLNL	7	2	3	6	1	3	6	5	6	7	7	6	1	3	6	6	5	80	102
SNL	1	2	2	3	4	5	7	1	6	8	3	3	1	2	3	6	2	59	69
ORNL	2	3	5	3	4	3	2	5	7	9	2	8	3	2	3	4	3	68	119
ANL	5	3	1	4	1	3	3	1	5	2	3	2	3	1	3	3	3	46	85
BNL	3	1	1	2	1	1	0	0	1	1	0	1	1	1	1	0	1	16	27
LBNL	1	2	2	1	3	1	0	2	0	1	0	0	2	1	2	2	2	22	32
NREL									1	2	1	2	3	3	3	1	2	18	18
PNNL									4	3	6	6	3	3	1	3	3	32	67
SRS									1			0	0	0	0	1	0	2	2
INEEL										1		4	1	1	2	1	2	12	31

LOS ALAMOS NATIONAL LABORATORY

LANL Total = 94

Disclaimer: This chart claims only to accurately represent statistics for Los Alamos National Laboratory. Statistics for other DOE labs are a reasonable estimate from all available information but may not represent actual win numbers. The competition began in 1964. LANL first entered the competition in 1978. The most accurate accounting from other labs is from 1988 to 2003.



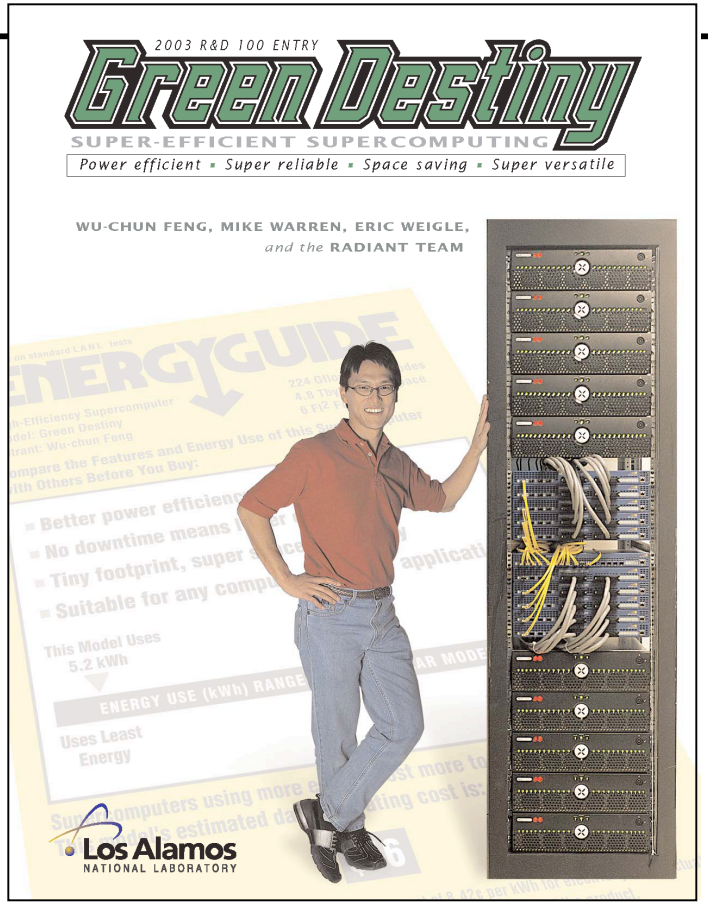
Flexible Superconducting Tape — carries high currents in high magnetic fields at liquid-nitrogen temperatures

FlashCT™ — high-speed, industrial, computed tomography scanning system for producing high-resolution, 3-D images of external and internal geometries of objects

Los Alamos
NATIONAL LABORATORY

R&D 2003 WINNER

BASIS — Biological Aerosol Security and Information System



Green Destiny — the world's most efficient supercomputer

Los Alamos
NATIONAL LABORATORY

Why Submit?

- **Work with team of professional writers and designers and business/market experts**
- **Produce excellent marketing tool**
- **Gain scientific recognition — internal and external (winners and non-winners)**
- **Secure or develop intellectual property awareness and protection**

Who Cares?

- **The Lab — peers, group, division, directorate, and the Director**
- **State and National recognition**

- **Metric for DOE and Lab's value and scientific contribution**
- **LDRD funds awarded to winning teams**

Submission requirements

- **Fill out electronic entry form**
- **Obtain management approval**
- **Attend interview**
- **Register with Cindy Boone by supplying cost code and program code for IM work**

Entry draft includes

- **Executive summary (1 page)**
- **Primary function (~4 pages)**
- **List of competitors or existing technologies**
- **Comparison matrix**
- **Improvement on competition**
- **Other applications**
- **Summary**
- **Letters of endorsement or recommendation**
- **Appendix (papers, patents, press releases. . .)**

R&D 100 —Year 2001 winner results

- 20 national labs
- 13 govt. agencies
- 8 universities

- 125 total winning institutions
- 148 total winners (combined entries)

Key Factors

- more intelligent products
- more environmentally safe products
- stronger technology
- more bio
- emphasis on smaller size
- more non-US winners

LDRD Awards

$50 k will be awarded to each winning team

—2005 winners will receive LDRD awards from FY06 funding. Amount of award is dependent upon % of LDRD funds allotted to the Laboratory.

Issues

- Cost of submissions
- PI's time commitment
- Commitment to due dates
- Intellectual property / patent law
- Importance of comparison matrix
- Market knowledge
- Letters of endorsement/recommendation

Eligibility Requirements

- Any new technical advancement first available for purchase or licensing between Jan. 1, 2004 and December 31, 2003
- Must have commercial and/or large market potential
- *Or* must have societal impact
- Must have "appeal" or "Gee Whiz" affect

Physical existence of the invention must be proved in a photograph, sample, or test results

"How to win an R&D 100 Award"

- **Key criteria is "technological significance"**

Products and processes that can change people's lives for the better, improve the standard of living for large numbers of people, save lives, promote good health, clean up the environment . . .

EXAMPLE

- **Significant breakthrough improvement**

53 times faster, 103 greater throughput, 503 times more accurate, 5% gain in energy efficiency. . .

- **The "WOW" factor–how did they do that?**

Government Labs

The magazine recognizes that government labs do not compete with private industry—but, we can collaborate, license, and share our research

So—inventions from government labs must be "available for order" or license to the private sector during the year of eligibility — or open source

Resubmissions

- **A major change related to your product**
- **May be a new or different product**
- **Newly discovered applications**
- **Outside event has enhanced the value of the original product.**

Comparison matrix parameters

- Signal-to-noise ratio
- Weight
- Speed
- Reliability
- Resolution
- Cost
- Accuracy
- Life expectancy
- Mean time between failures
- Sensitivity
- Reproducibility
- Strength
- Power consumption
- Production yield
- Environmental operating
- Intensity
- Efficiency

Suggested additions to applications

- Physical Example of product or results
- Support for your claims
- Photos, schematics, press releases
- Letters, testimonials
- Video tape of invention (optional), 3-10 minutes

Be creative!

- Electronic entry form – complete before interview
- Interviews scheduled – October 2004
- PI entry draft (w/ IM& TT help) – November & December 2004
  due December 22, 2004
- IM entry preparation – January to mid February
- IM entry production – 2nd half of February
- Mail completed entry – March 1, 2005
- Director-hosted ceremony for all submitters – May 2005
- R&D Magazine Awards Banquet – October 2005

Winners Announced – July 1, 2005

Experience Says . . .

- Enter technologies that are useful, have broad appeal, and have a number of applications
- Product price is important, if possible
- The product must be marketable
- A good industrial partner helps
- Letters of support from industry or peers

Characteristics of Recent Winners

- Short industry deployment time frame, large market impact
- Very advanced in commercialization, product realization

NO	YES
• "just good science"	• Operational prototype (?)
• R&D	• Packaged tech / product
• Concept	• New technology-product-process
• Initial test results	• New enabling capability
• Proof - of - Concept	• Improvements (?)

OTHER AWARDS TO CONSIDER

FLC Awards

DOWJones Technology Innovation Awards

Popular Science

Discover **Magazine Awards for Technical Innovation**

Rolex

Albert Lasker Medical Award - Federal Laboratory Consortium Awards

Send Electronic Entry Form and set up interview appointment

Contact Carole Travis 667-6756 or ctravis@lanl.gov

Entry questions contact

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R&D Magazine Web Page

http://www.rdmag.com

Los Alamos R&D 100 Web Page

http://www.lanl.gov/partnerships/rd100/form04.pdf

Kickoff Meetings
Technology Transfer
Pecos Conference Room

September 14, 2004	11:00 - 12:00
September 21, 2004	10:00 - 11:00